

# PATENT COOPERATION TREATY

CID: 300

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From the:  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

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RECEIVED WITH THANKS

18 JUN 2004

F.B. RICE & CO.

## PCT

WRITTEN OPINION OF THE INTERNATIONAL  
PRELIMINARY EXAMINING AUTHORITY  
(PCT Rule 66)

Date of mailing  
(day/month/year) 17 JUN 2004

Applicant's or agent's file reference  
502331

**REPLY DUE** within **TWO MONTHS**  
from the above date of mailing

International application No.  
**PCT/AU2004/000464**

International filing date (day/month/year)  
8 April 2004

Priority date (day/month/year)  
11 April 2003

International Patent Classification (IPC) or both national classification and IPC

**Int. Cl. <sup>7</sup> H02J 7/00**

Applicant

COCHLEAR LIMITED et al

1. ☒ The written opinion established by the International Searching Authority:

☒ is ☐ is not

considered to be a written opinion of the International Preliminary Examining Authority.

2. This **second** (second, etc.) opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

3. The applicant is hereby **invited to reply** to this opinion.

**When?** See the **Reply Due** date indicated above. However, the Australian Patent Office will not establish the Report before the earlier of (i) a response being filed, or (ii) one month before the **Final Date** by which the international preliminary examination report must be established. The Report will take into account any response (including amendments) filed before the Report is established. **If no response is filed by 1 month before the Final Date**, the international preliminary examination report will be established on the basis of this opinion.  
Applicants wishing to have the benefit of a further opinion (if needed) before the report is established should ensure that a response is filed at least **3 months before the Final Date** by which the international preliminary examination report must be established.

**How?** By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3.  
For the form and the language of the amendments, see Rules 66.8 and 66.9.

**Also** For an additional opportunity to submit amendments, see Rule 66.4.  
For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4bis.  
For an informal communication with the examiner, see Rule 66.6.

4. The **FINAL DATE** by which the international preliminary report on patentability (Chapter II of the PCT) must be established according to Rule 69.2 is: 11 August 2005

Name and mailing address of the IPEA/AU  
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WRITTEN OPINION OF THE  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

International application No.

1005 Rec'd PCT/PTO 11 OCT 2005  
PCT/AU2004/000464

Box No. 1	Basis of the opinion
1.	<p>With regard to the <b>language</b>, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.</p> <p><input type="checkbox"/> This opinion is based on a translation from the original language into the following language  which is the language of a translation furnished for the purposes of:</p> <p><input type="checkbox"/> international search (under Rules 12.3 and 23.1 (b))</p> <p><input type="checkbox"/> publication of the international application (under Rule 12.4)</p> <p><input type="checkbox"/> international preliminary examination (under Rules 55.2 and/or 55.3)</p>
2.	<p>With regard to the elements of the international application, this opinion has been established on the basis of (<i>replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed."</i>):</p> <p><input checked="" type="checkbox"/> the international application as originally filed/furnished</p> <p><input type="checkbox"/> the description:    pages   ,    as originally filed/furnished                                pages   ,    received by this Authority on    with the letter of                                pages   ,    received by this Authority on    with the letter of</p> <p><input type="checkbox"/> the claims:        pages   ,    as originally filed/furnished                                pages   ,    as amended (together with any statement) under Article 19,                                pages   ,    received by this Authority on    with the letter of                                pages   ,    received by this Authority on    with the letter of</p> <p><input type="checkbox"/> the drawings:    pages   ,    as originally filed/furnished                                pages   ,    received by this Authority on    with the letter of                                pages   ,    received by this Authority on    with the letter of</p> <p><input type="checkbox"/> a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.</p>
3.	<p><input type="checkbox"/> The amendments have resulted in the cancellation of:</p> <p><input type="checkbox"/> the description, pages</p> <p><input type="checkbox"/> the claims, Nos.</p> <p><input type="checkbox"/> the drawings, sheets/figs</p> <p><input type="checkbox"/> the sequence listing (<i>specify</i>):</p> <p><input type="checkbox"/> any table(s) related to the sequence listing (<i>specify</i>):</p>
4.	<p><input type="checkbox"/> This opinion has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).</p> <p><input type="checkbox"/> the description, pages</p> <p><input type="checkbox"/> the claims, Nos.</p> <p><input type="checkbox"/> the drawings, sheets/figs</p> <p><input type="checkbox"/> the sequence listing (<i>specify</i>):</p> <p><input type="checkbox"/> any table(s) related to the sequence listing (<i>specify</i>):</p>

WRITTEN OPINION OF THE  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

International application No.

PCT/AU2004/000464

**Box No. V**      **Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Claims 1-33	YES
	Claims	NO
Inventive step (IS)	Claims 2-19,22-24,26-33	YES
	Claims 1,20,21,25	NO
Industrial applicability (IA)	Claims 1-33	YES
	Claims	NO

**2. Citations and explanations:**

- D1 US 6426628 (PALM et al.) 30 July 2002 and D5 US 5869970 (PALM et al.) 9 February 1999  
D2 WO 02060029 (COCHLEAR LTD.) 1 August 2002  
D3 WO 0069012 (EXONIX CORP.) 16 November 2000  
D4 US 5903764 (SHYR et al.) 11 May 1999  
D5 US 5869970 (PALM et al) 9 February 1999

**Novelty (N)**

None of the citations explicitly discloses all of the features of the claims, when the citations are taken alone. The claims may be considered novel, although (see Box VIII) the claims are not fully supported by the description and lack clarity so this is open to interpretation.

**Inventive step (IS)**

D4 discloses a plurality of switch-drivers and a plurality of smart batteries. The batteries are selectively recharged by the smart battery selector. Use of either one or the other of two smart batteries is also explicitly disclosed. Separate switches connecting either of the batteries to the output (or load) are also explicitly disclosed (see figures). Claims 1 and 25 lack an inventive step when D4 is combined with common general knowledge in the art of electronics. There are minor (non-inventive) differences between D4 and the claim, for example D4 uses a plurality of smart batteries, as distinct from ordinary (non-smart) batteries, consequently the citation is considered a Y document. However D4 explicitly discloses a smart charger and a smart selector in conjunction with the smart battery. Furthermore D4 discloses a conversion means (AC/DC) for supplying the smart charger voltage from the supply voltage. In some interpretations it would be obvious that a "first conversion means for converting a supply voltage to a battery voltage to enable charging of one or more of the rechargeable batteries" (as recited in claim 1) is a technical equivalent to the arrangement of D4, since D4 allows selection of one or more of the batteries to be charged.

D4 is directed to a portable device and does not disclose that the system forms part of an "implantable device". Since the present application management system preferred embodiment is for an implantable device (eg. hearing aid) and since there are non-trivial problems to be overcome in adapting the system of D4 into an implantable device, Claims 20 and 21 do involve an inventive step when D4 is taken alone. Nevertheless D2 discloses a use for a plurality of batteries in an implantable hearing aid. When D2 is combined with D4, claims 20 and 21 lack an inventive step.

D1, D3 and D5 also disclose power management systems for implantable devices. Hence claims 20 and 21 lack an inventive step when any one of D1, D3 and D5 are combined with D4.

**Industrial applicability (IA)**

The application and claims have an industrial application.

WRITTEN OPINION OF THE  
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Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

1. Claims 1 and 25 are not fully supported by the description. There are two preferred embodiments (see figure 1 and figure 4). The first embodiment, see figure 1 with reference to the description page 8 line 32 to page 10 line 4 the control unit provides **"pseudo-simultaneous charging of all batteries"** and **"pseudo-simultaneous discharging of the batteries"**. The second embodiment, see figure 4, with reference to the description page 10 lines 28 to page 11 line 14 is similar with respect to the pseudo simultaneous battery switching, except the first voltage converter is reused. Claims 1 and 25 do not match the description in function or purpose, which is required by PCT rules. The claims go beyond the disclosure and are considered speculative in nature.

2. Claim 1 and 25 are unclear as to whether the battery switches are connected simultaneously (or not) to either the charging means or the output circuit.

Even claim 4 that specifies that batteries are chosen, **"one at a time"** is still not entirely clear because the period of **time is not defined**. For example the time period may be understood to be long (eg. until the battery is charged or discharged) or short (eg. for less than a second during the pseudo simultaneous or multiplexed switching time).

Such lack of clarity in most of the claims has resulted in an unclear scope of the monopoly intended. Further opinion on the novelty and/or inventive step is reserved until the clarity and full support for the claims requirements are addressed